Linear Low Density Polyethylene

**Product Description:**
LLDPE F2001S is a butene co-monomer based natural colored grade produced with the latest Ineos Gas Phase polymerization Technology exhibiting following features:
- Excellent Mechanical Properties
- Very Good optical properties
- Easy Processing
- With Slip & Anti-block additives

**LLDPE F2001S** is recommended for following applications:
- Co-extrusion films
- Liquid Packaging films
- Drip laterals
- Agriculture Films

**Typical Properties:**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Properties</th>
<th>Test Method</th>
<th>Units</th>
<th>Values*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Physical Properties</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Melt Flow Index (190°C &amp; 2.16 kg)</td>
<td>ASTM D1238</td>
<td>g / 10 min</td>
<td>0.90</td>
</tr>
<tr>
<td>2</td>
<td>Density (at 23 °C)</td>
<td>ASTM D1505</td>
<td>gm/cm³</td>
<td>0.919</td>
</tr>
<tr>
<td></td>
<td><strong>Mechanical Properties</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Tensile Strength @ Yield (50mm / min) (MD/TD)</td>
<td>ASTM D882</td>
<td>MPa</td>
<td>11.0/12.0</td>
</tr>
<tr>
<td>4</td>
<td>Tensile Strength @ Break (50mm / min) (MD/TD)</td>
<td>ASTM D882</td>
<td>Mpa</td>
<td>44.0/40.0</td>
</tr>
<tr>
<td>5</td>
<td>Elongation @ Break (50mm / min) (MD/TD)</td>
<td>ASTM D882</td>
<td>%</td>
<td>600/800</td>
</tr>
<tr>
<td>6</td>
<td>Dart Impact Strength, F_{20} (38mm dart, 66cm height)</td>
<td>ASTM D1709</td>
<td>g/µm</td>
<td>3.5</td>
</tr>
<tr>
<td>7</td>
<td>Tear Strength (MD/TD)</td>
<td>ASTM D1922</td>
<td>g/µm</td>
<td>3.5/10.0</td>
</tr>
<tr>
<td>8</td>
<td>Coefficient of Friction (Static/Dynamic)</td>
<td>ASTM D1894</td>
<td>-</td>
<td>0.23/0.16</td>
</tr>
<tr>
<td>9</td>
<td>Film Gloss (60°)</td>
<td>ASTM D523</td>
<td>%</td>
<td>70</td>
</tr>
</tbody>
</table>

* Mechanical Properties tested on 40 µ (microns) thick monolayer blown film made with 1.8 mm die gap and 2.25 BUR.
* Typical Values and not to be taken as specification limits, values may change without any prior notice.

Recommended Processing Temperature: 170 – 210 °C

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Contact: ONGC Petro Additions Ltd., Polymer Marketing Group: 1st Floor, Omkara Complex, Sai Chowkdi, Manjalpur, Vadodara 390011, Gujarat, India
Telephone: +91 265 6192600, Fax: +91 265 6192666, Corporate Site: [www.opalindia.in](http://www.opalindia.in)
PARC/2016/03 - 00
Provisional Technical Datasheet

F2001S

**Regulatory Requirements:**
LLDPE film grade F2001S shall meet the requirements stipulated in IS 10146:1982 on ‘Specification of Polyethylene for safe use in contact with Foodstuff, Pharmaceutical & Drinking water’. The grade and Additives incorporated in this grade shall meet the positive list of constituents as prescribed in IS 10141:1982. The Grade and the additives incorporated in it shall also comply with the FDA: CFR Title 21,177.1520, Olefin Polymers.

**Storage & Handling:**
Prevent Polyethylene Material from direct exposure to sunlight & heat to avoid quality deterioration. The storage location should be dry, dust free and the Storage temperature should not exceed 50 °C. Non-compliance to these precautionary measures can lead to degradation of the product causing Color changes, Odor & inadequate product performance.

**Health and Safety Information:**
The product described herein may require precautions in handling and use because of toxicity, flammability, or other consideration. The Material Safety Data Sheet (MSDS) contains the available product health and safety information for this material and can be found at www.opalindia.in. Before using any material, a customer is advised to consult the MSDS for the product under consideration for use.

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